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TEC Routing Topic Group Task Plan (as of 12/18/07)

Status: Active

DOE Leads: Office of Civilian Radioactive Waste Management (OCRWM),
Office of Logistics Management, Alex Thrower (202) 586-7905

Start Date: October 20, 2006

Purpose: The Transportation External Coordinating (TEC) Working Group's Routing Topic Group (RTG) will examine topics of interest and relevance concerning routing of shipments of spent nuclear fuel (SNF) and high-level radioactive waste (HLW) to a national repository at Yucca Mountain, Nevada. The purpose of the RTG is to provide stakeholders with a forum to provide their perspectives to the Office of Logistics Management (OLM) in the Department of Energy's (DOE's) Office of Civilian Radioactive Waste Management (OCRWM) regarding processes for identifying routes for shipping spent nuclear fuel and high-level radioactive waste to Yucca Mountain.

Approach: The RTG will convene regular conference calls (monthly or as needed) and will meet at semiannual TEC meetings. Smaller work groups will meet and/or hold teleconferences as necessary, reporting back to the full Routing TG during regular calls and at meetings. OLM and RTG members will work collaboratively to develop agendas for meetings and conference calls.

Objective: The overall objective for OLM's routing approach is to have cooperative development of a routing approach and process that is reasonable and defensible. OLM intends to use the RTG for cooperative, detailed input into route analysis, assessment, and identification. OLM is also working with state regional groups, and other entities, to assess information about, and approaches to, identifying routes.

The ultimate goal of all the routing work is to come up with a preliminary set of routes from origin sites that will provide an advanced planning framework for State and Tribal authorities and for implementing 180(c) initiatives, as well as long-lead time (i.e. - 5+ years before shipment) logistical analyses to begin preparing for shipments to the Yucca Mountain repository. The results will represent a starting point for discussions between DOE, corridor jurisdictions, and transportation carriers, and for discussions between DOE and carriers regarding shipping arrangements. This work will also provide railroads a basis for security and operational reviews in advance of shipments to Yucca Mountain, and ensure routes for shipments are identified sufficiently in advance to support planning and readiness for transportation operations.

This initiative to work with the TEC Routing Topic Group and others to address the approach for identifying routes is intended to be responsive to a recommendation in a National Academies' report on SNF transportation that "DOE should identify and make public its suite of preferred highway and rail routes for transporting spent fuel and high

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level waste to a federal repository as soon as practicable to support State, Tribal and local planning, especially for emergency responder preparedness.”

OCRWM will entertain any reasonable approach for achieving the objective to identify a suite of routes that can be used for making shipments to the repository. "Reasonable" means there will be fair, objective analysis of potential routes that can be implemented by rail and highway carriers safely, and at a cost comparable to other hazardous materials. "Reasonable" and "planning-basis" does not mean every route from every site by any mode must be fully analyzed before any decisions can be taken.

Activities: Activities for the entire topic group will focus on issues agreed upon by the topic group's membership. Specific activities will include:

1. *Define “Suites of Routes”* – The RTG will discuss possible interpretations of the “suites of routes” concept. Considerations will include multiple routes from each originating plant and collections of routes from plants in across-the-nation corridors. The Topic Group will identify and assess the consequences for each different interpretation of suites of routes including impacts on implementation of Section 180(c) of the Nuclear Waste Policy Act. The goal will be to recommend an interpretation that incorporates input from stakeholders. *[Status—Completed. Definition finalized at July 2007 TEC meeting]*
2. *Conduct “Standard Problem” Routing Exercise* – RTG participants will engage in an exercise to identify routes from a limited number of SNF sites. Purpose is not to identify specific routes, but to apply different approached and criteria for comparative purposes only. Results and approaches will be compared at one or more dedicated working sessions. *[Status—draft exercise approach has been reviewed by the RTG and was approved in concept in a teleconference held on December 6, 2007. Participants are being identified and a formal “standard problem” statement and data package is being developed. Anticipate activity kickoff at or before February 2008 meeting, and completion of the standard problem by June 30, 2008.]*
3. *Develop Routing Principles* – The Routing TG will review historic routing studies conducted by DOE, states, and others to determine fundamental principles for identifying suites of routes. These principles will be used to guide development of the approach for identifying routes. *[Status—draft has been developed, principles document will be finalized following completion of “standard problem” routing exercise]*
4. *Develop an Approach/Methodology to Identify Suites of Routes* – based on the results of the above activities, as well as other approaches taken by State Regional Groups (SRGs) in the Midwest and the Northeast to evaluate route alternatives and identify regional routes. Proposed approaches, including use of national evaluation criteria as proposed by OCRWM, approaches used by other DOE programs, or approaches proposed by other topic group members will also be reviewed. The objective of this effort will be to assess various approaches that may be useful for identifying suites of

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routes nationally and determine their effectiveness in route evaluation. The goal is to identify an approach for identifying routes for OCRWM shipments that is acceptable to a broad cross-section of stakeholders. *[Status—depends on results of activities outlined above, but the next draft for discussion is expected in April 2008]*

5. *Identify Preliminary Suites of Highway, Rail, and Barge Routes* – Beginning with the results of SRG projects to identify regional suites of routes in the Midwest and Northeast and using the definition, principles, criteria, and other information from the activities described above, the RTG will develop a national draft of preliminary suite of routes (DPSR) for discussion purposes. The DPSR will provide a starting point for the subgroup to consider, revise, and adjust criteria and methodology in working to develop a suite of routes. Table-top exercises, teleconferences, meetings, individual initiatives by the SRGs and by other stakeholders (e.g., AAR, USTC, individual carriers, utilities, etc.) will be used to allow broad participation in the route identification process. *[Status— completion of this activity is currently an OLM Baseline Milestone, with an expected completion date of 12/31/08]*
6. *Review Analytical Tools and Data for Routing Analysis* – The RTG will review the use of the current routing analysis tools TRAGIS and RADTRAN to assess how these tools can best be used in the process of identifying suites of routes, and to determine if these tools can adequately perform all analyses that are needed for proper routing analyses. The objectives of this effort will be to: identify needs for additional, improved, or updated data; assess the utility of various kinds of data in identifying suites of routes; and assess the adequacy, clarity, completeness, and usefulness of the outputs from these codes. *[Status: This activity has been ongoing, but is expected to be completed by June 30, 2008]*
7. *Monitor Regulatory and Legislative Developments* – The RTG will monitor and review proposed new regulations/rulemakings as well as proposed legislation that may affect routing of OCRWM shipments. The principal purpose of this activity will be to provide the RTG with information about (and analysis of) regulatory and legislative initiatives that may affect the Group's other activities. *[Status: An ongoing task, with no end date]*

Products: Reports and other documentation will be prepared by those working on individual activities and presented to the entire RTG for review.

1. *Definition of “Suites of Routes”* – Prepare a recommended definition of “Suite of Routes” to explain what constitutes the suite, how OCRWM will use the suite, and the impact such use will have on stakeholders (e.g., states, tribes, and railroads).
2. *Issue “Standard Problem” Report* – Prepare a report describing the outcomes of various routing approaches and explanations/justifications for the different group outcomes.

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3. *Issue Routing Principles Report* – Prepare a recommended list or principles for use in identifying routes for shipments of SNF and HLW.
4. *Issues Report on Approaches to Route Identification* – Prepare a report that describes an approach for identifying routes that reflects the input of, and acceptance by, the topic group members. The report will document not only the approach but the rationale and discussion that led to the selection of the approach.
5. *Identify Preliminary Suites of Routes* – Prepare a report that identifies and comments on the advantages and disadvantages of the DPSR from the perspective of the affected stakeholders. The report will be a follow-up to the preceding reports (e.g., definition of suite of routes, routing principles, approach for identifying routes, and routing criteria). The report will also assess the approach used to develop the DPSR, identify and examine potential problems and alternatives for addressing them, and provide comments and suggestions to OCRWM for identifying preliminary national suites of routes.
6. *Report on Routing Analysis Tools and Data* – Prepare a report that assesses the use of routing analysis tools such as TRAGIS, RADTRAN, decision analyses techniques for identifying suites of routes, and identifying analyses that are needed but not currently available. In addition, the report would identify adequacy of current data input and output, identifying additional data needed to support analysis of routes and identification of a preliminary suite of routes. The report will consider data already in use, the need for updated or additional data, the utility of this data for assessing routes against routing criteria, and the use of the data by the available routing analysis tools.

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